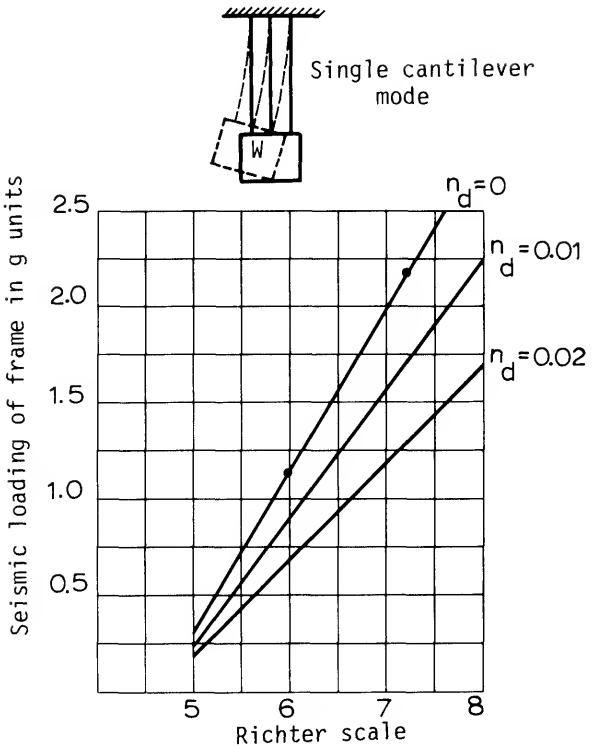

Fig. 12.2 Seismic loading on space frame in single-cantilever mode.

$$\delta = \frac{7200}{6600} = 1.09 \text{ in.} \quad \text{(double cantilever)}$$

4. The periods of the fundamental modes are obtained, for example, from Eq. (11.1):

$$T = 2\pi \left(\frac{\delta}{g}\right)^{1/2}$$

where

$$g = 386.4 \text{ in./sec}^2$$

Hence,

$$T = 6.28 \left(\frac{0.12}{386.4}\right)^{1/2} = 0.11 \text{ sec} \quad \text{(single cantilever)}$$

$$T = 6.28 \left(\frac{1.09}{386.4}\right)^{1/2} = 0.33 \text{ sec} \quad \text{(double cantilever)}$$